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ABSTRACT

This qualitative study sought information about the content, nature, and diversity of teachers' beliefs and principles. Selected studies involving the beliefs of teachers in the areas of curriculum theory and innovation, decision making and thinking, and improving teaching are discussed and analyzed. A discussion of the study's methodology points out that there are numerous problems in obtaining information in an area which is by nature somewhat elusive. An established methodology, the Repertory Grid Technique, developed by G. A. Kelly in 1955, is described. Detailed discussion is presented of 4 of 14 middle school teachers' interview responses. The Repertory Grid developed from interviews with one teacher is displayed. Some generalized conclusions are drawn on the efficacy of the Repertory Grid Technique in research of this kind and on its possible value in determining teachers' points of view. (JD)

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A Qualitative Study of Teachers' Beliefs and Principles

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Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, April 1983

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ABSTRACT

A Qualitative Study of Teachers' Beliefs and Principles

Hugh Munby

The study reported here had two objectives: to determine the nature of beliefs and principles held by teachers which, through their perceptions, seemed to dominate their thinking about teaching; and to find a conceptual orientation to qualitative research of this type. Consistent with a conceptualist approach, the Repertory Grid of Kelly was used in interviews with twelve middle-school teachers. The results of the study are reported in two ways. First, the beliefs and principles are treated generally to show their uniqueness and diversity. Second, the findings from interviews with four of the teachers are reported as case studies.

Introduction

Anyone who has observed many, many teachers of all ranges of experience has probably noticed that few commonalities are to be found in the ways that they teach. True, most use the chalkboard and other aids, most (as the research has it) speak more than their students, and so on. But this list of superficial commonalities ends rather quickly, and one is struck most by the singular fact that each teacher appears to teach differently. This is hardly remarkable, since we have long recognized the uniqueness of each human being and teachers are "only human" after all. Perhaps, though, what is remarkable in all of this is what we as educational researchers have made of the uniqueness of each teacher's performance. No doubt teachers teach differently because among other things they think differently, hold different beliefs, possess idiosyncratic conceptions of what it is to engage in that particular professional activity. Oddly, it is only recently that the fact of these uniquenesses has intruded significantly upon research in curriculum, teacher decision making, and the improvement of teaching.

This paper describes a qualitative study directed at revealing information about the content, nature and diversity of teachers' beliefs and principles. To set the context, the paper begins by describing salient features of the three areas of educational inquiry just mentioned, to show how they depend for their advancement upon a clearer picture of the nature and scope of such beliefs. Other sections discuss, in order, some methodological snares, the study's design, and some of its more interesting and reportable findings.

Teachers' Beliefs and Educational Research

Given the obvious importance of beliefs and principles to an individual teacher's professional activity, it is somewhat surprising that educational

research has turned its head in this direction only in recent years. (In part, of course, the explanation for this oversight may lie in the power that the quasi-scientific approach has held over educational research, an approach which perforce overlooks idiosyncrasies in its lusting after generalizations. As the grip relaxes, so the study of idiosyncrasies and particulars can grow.) In this section, attention is given to recent and carefully selected studies involving, to various extents, beliefs of teachers. These studies fall under the headings of curriculum theory and implementation (or innovation), teacher decision making and thinking, and improving teaching. While these areas of work may seem at first unrelated, the discussions which follow show that they share a reliance upon understandings of teachers' beliefs and principles.

For two reasons there is no attempt here to provide complete reviews of these three areas of activity. First, the intent is to show how the focus on particulars of teachers' beliefs is significant in the areas in question, and one needs few studies to make this point. Second, extensive reviewing is not the object of this piece; the references cited in the studies noted here provide a valuable source for the reader who is so inclined.

Curriculum Theory and Implementation

Four studies are discussed briefly here to show how the field of curriculum theory and curriculum implementation is increasingly attending to teachers' beliefs and principles. Each study, though, addresses the matter in importantly different ways.

The first of these four studies is an essay by Roberts (1980) "Theory, curriculum development and the unique events of practice." The principal thrust of this essay is to develop a conception of the theory-practice relationship which establishes that "theory and practice in education are

irreconcilably different in nature and purpose" (p. 65). The conception which is developed, the "theory-practice interface" (treated below), emerges from a considerable extension of the work of Schwab in this area and draws on a curriculum implementation phenomenon in science education for illustration: being the oft-noted difference between what gets presented in the classroom and what was intended by the curriculum developers. Roberts views this difference as a mismatch between developers' intents and teachers' actions, and argues that the essence of the mismatch is the epistemological chasm between the theoretic and the practical, between the developer's "world" of developer's intentions for hypothetical students (a theoretical world leading to curriculum materials for generalized use) and the teacher's world of specific teaching designed for known, real but unique students. Between these two worlds lies the interface, a conceptualization Roberts employs to explain the mismatch. Basically, curriculum materials contain points of view, conceptualizations, intents, etc., of the developer. The teacher, though, may not share these and indeed may not even see them, seeing instead the verbiage of the intents through his or her unique perspective. Interpretation will ensue, and as a consequence curriculum materials become modulated (Roberts' phrase). Significant to the present discussion is the fashion in which a teacher's beliefs and principles, be they about appropriate knowledge, views of learning and so on, together with his perception of the professional context in which he finds himself, interact with the text of curriculum materials and the theoretic generalizations they carry concerning views of learning, knowledge and so forth. Roberts' conceptualization has considerable potential for explaining the notable curriculum implementation phenomenon of mismatch in terms which are consistent with current understandings of the nature of the practical and the

theoretic. It takes no effort at all to adopt Roberts' perspective and then to see the influence that a teacher's unique beliefs and principles can have at the interface upon a designed curriculum.

How teachers' beliefs and principles interact with the adoption of novel curricula is the focus of a study by Olson (1981). Specifically, he is concerned for the dilemma that teachers face when doctrines behind the innovation are perceived by them to be fundamentally at odds with their perceptions of their roles in the classroom. Olson's study investigates the thoughts and feelings of eight science teachers who attempted to implement the English Schools Council Integrated Science Project. His concept of dilemma is particularly apt to this innovation for the SCISP program is built upon a conception of the teacher (as guide in inquiry) which is quite contrary to the conception of teaching held by the teachers using the curriculum--their conception being recognizably traditional: teacher as central authority, preparing students for examinations, and so on.

To probe for the features of teachers' beliefs of interest to his study, Olson used the Repertory Grid Technique of Kelly (1955), and found that "an important common and underlying construct in the practical language of teachers is that of classroom influence" (p. 264). He discovered that teachers resolved the dilemma of dealing with a curriculum which called for low classroom influence in a number of ways. For instance, project discussion lessons were, in one case, translated into direct instruction, and in another case into end-of-chapter, homework-type questions. For another, discussion lessons were viewed as "pure waffle."

Olson's study yields more than can be revealed here. Yet, the emergent theme of the present argument is evident in this work: teachers' beliefs and principles interact very significantly with the doctrines begetting new

curriculum with the result that the innovation becomes translated sometimes unrecognizably in the classroom world.

An extensive study of the understandings of 60 elementary school teachers under conditions of a change to open and less formal approaches to instruction has been conducted by Bussis, Chittenden and Amarel (1976). These investigators used a "semi-standardized" interview format to map a number of understandings or beliefs about the cognitive and personal/social content of the curriculum (which the authors characterize as the deep level of the curriculum), the significance of needs and feelings, and the importance of interest and of choice. In addition, the investigators gathered information about teachers' confidence in the proposition that learning can occur in self-defined or self-directed activity, and about their perceptions of the assistance they had in the change to less formal instruction.

The investigators report a wealth of detail and contrast in their results: some teachers see the curriculum cognitively as dealing simply with grade-level facts and skills, while others speak more in terms of the reflectivity that the curriculum is intended to develop. In the personal/social dimension of the curriculum, views range from the curriculum as encouraging good school behavior and docility to a comprehensive outlook on the development of awareness and acceptance of self. Similarly varied perceptions are held of the importance of needs and feelings, here ranging from the view that needs and feelings are only remotely connected to school learning to the view that they are integral to learning. Not surprisingly, there are also wide variations in how teachers perceive student interest (from being an optimal organizer to learning to having little or no connection to learning) and the importance of student choice (from being

necessary to interest and learning to being quite incidental). The disparate views are grouped by the investigators and so provide one with a sense of the variety of beliefs and understandings of each teacher. That there are so many differences is again testimony to the importance of considering teachers' beliefs and principles when dealing with curriculum theory and implementation.

The fourth study selected for inclusion in this brief review is Elbaz' study of a teacher's practical knowledge. This study is significant not so much for the way in which it argues the importance of teachers' beliefs and principles, though it does this well by attacking the implicit view of teachers' knowledge within top-down development, but for the development of a conceptual model of a teachers' practical knowledge. Elbaz explains:

> But I wanted to do more than simply catalogue the content of teachers' knowledge. A formulation which expresses this larger concern is the notion that teachers hold, and use their knowledge in distinctive ways, and that this holding and using of knowledge marks it as "practical knowledge." (p. 47)

Elbaz' argument, thickly illustrated with a case study, proposes to conceptualize teachers' practical knowledge as consisting of four broad categories: content, orientations, structure, and cognitive style. The content of practical knowledge deals straightforwardly with the specific pieces of subject matter, curriculum, instruction, and school milieu. Orientations, though, are novel to a way of thinking about practical knowledge and allow one to speak of ways in which practical knowledge is held and used. There are five of these: situational, which is a particular orientation toward sorting out practically useful from less useful knowledge and toward seeking useful knowledge. The second orientation, theoretical, is

an orientation toward theory--generally subject matter. A third orientation is "personal," which speaks to a professional's orientation to that which has personal meaning. The last two orientations are "social" (referring to the social conditions that shape knowledge) and "experiential" (which honors the experiential base out of which a teacher's knowledge grows).

Elbaz's conceptualization continues with the category "structure," reflected in such terms as "rule of practice" (followed methodically), "practical principle" (used reflectively) and "image" (brief metaphoric statements about how teaching should be, for instance, which guide action intuitively). The final category of the conceptualization is "cognitive style" which refers to how people experience the separate pieces of their realities.

Of course, Elbaz' work yields a complex picture of the nature of practical knowledge, but this is right and proper for, as she illustrates in her case study, the reality <u>is</u> complex. Her argument then, may be seen as strong support for the view that not only are teachers' beliefs and principles (components of their practical knowledge) highly important, but also they are varied, rich and unique.

<u>Teacher Decision Making and Thinking</u>

The previous paragraphs should go some distance toward establishing the claim that, in curriculum work at least, we need considerable knowledge about teachers' beliefs and principles. The same can be said of work in teacher thinking and decision making, but it may be said more swiftly for the salient studies in this field have been reviewed previously (Munby, 1982). The intent of that paper was to show that teachers' beliefs and repertories of understanding need to be considered and understood before much more work on teacher thinking and decision making was pursued. This conclusion was

reached after an examination of the two leading theoretical models (the decision-making model and the problem-solving model) and of studies selected from the educational research these models have fathered showed several difficulties. For example, in studies in which "teacher thinking" is investigated by providing teachers with information about fictional cases or by using stimulated recall techniques, arguments which are intended to make points about teacher thinking and decision making may do so on the basis of tenuous assumptions. The pervasive assumption is that the researchers and the teachers they study share perceptions about the meaning of cues and of the statements these prompt. MacKay and Marland (1978), in a study of decision making during instruction, report "numerous teaching principles were cited by teachers in the stimulated recall protocols" (p. 20). Yet it is not clear from the study whether these principles were cited as principles by the teachers (because the principles were recognized and wielded as such) or that these principles were imposed upon the substantive content of the transcripts by the researchers. Shavelson et al. (1977) used fictional clues about "Michael" in a study of decision making, and found that the cues were not used consistently across the sample of teachers when they answered questions about responding to Michael in class and the use of praise with him. As argued previously (Munby, 1982) "this could be construed as a consequence of the subjects' perceiving the information in the cues as possessing different significance and meaning depending on their established beliefs and theories about the teaching tactics that work optimally for them" (p. 14). This is not to say that teachers' beliefs and theories have been ignored in studies of teaching thinking. Russo (1978), for instance, included an instrument for measuring beliefs, yet the beliefs (traditionalist versus progressivist) tapped by the instrument appear to bear little relevance to beliefs which

might impinge directly upon a teacher's thinking about the classroom (Munby, 1982, p. 24ff). One gets a small piece of the picture when Shavelson and Stern (1981) comment on instructional planning as follows, "Unfortunately, the sequence of elements considered and the compromises that have to be made are, as yet, unknown. They probably depend on the particular task at hand as well as the proclivities of the particular teachers (p. 478).

Two of the recommendations contained in the Shavelson and Stern review are germane to the present discussion. The authors call for research directed at constructing a taxomony of critical decisions, and for a shift from descriptive studies to "empirical and conceptual research bearing on decision strategies and decision policies for the practice of teaching" (p. 490). And they recommend that "research on teaching should focus on teachers' thoughts, decisions and behaviors in studying how students (e.g., class composition, conflicting goals), classroom context (e.g., social relations) and organizational contexts (e.g., textbook adaptions, assignments of students to teachers) influence these decisions and behaviors" (p. 491). Taken together, these recommendations point to a continuing need to explore thoroughly the beliefs and principles which teachers hold and employ in their thinking about professional practice.

The Improvement of Teaching

Because teaching events occur in very particular contexts, any attempt to improve a teacher's practice must take account of that context and of the uniqueness of the teacher in it. An approach to improving teaching which attempts this is to be found in clinical supervision (Cogan, 1973; Goldhammer, 1969) which sets itself apart from other approaches by building procedures upon assumptions about the clinical nature of improving teaching

and the sort of intellectually grounded relationship which can exist between teacher and supervisor. Within this process, the clinical supervisor needs to work toward addressing not just behaviors which both participants think to be worthy of attention, but the beliefs or principles which give rise to these. In short, one could say that one of the many demanding tasks to be handled by the clinical supervisor is of having the teacher face and evaluate his or her beliefs.

The importance of beliefs and their support is not only central to the task of improving teaching, but is also central to how one addresses the total concept of professional education. Fenstermacher (1979) discusses two approaches to teacher education, which he characterizes as conversion and transformation. Conversion he sees as training: "The conversion schema, the schema of preference for those adopting conventional views of basic skills and teacher training, merely ignores teacher beliefs or tramples upon them on its way to writing mandates and interdicts" (p. 174-175). Genuine change, which can flow from having teachers confront their "subjectively reasonable beliefs," demands "an open and rational commitment from teachers" (p. 175) in a setting where subjectively reasonable beliefs may be rationally transformed into objectively reasonable ones. This, for Fenstermacher, represents the basic style of a professional education.

Given the attention to teachers' beliefs in these two major approaches, Cogan's focusing on a unique methodology and Fenstermacher's reflecting on the place and function of teacher effectiveness research, it is obvious that advances in understandings about appropriate ways of addressing the improvement of teaching depend upon our securing considerable knowledge about the nature of the beliefs and principles that teachers hold.

A Matter of Context

This very brief survey of three areas of educational research is not designed to stand alone as defense for the present study. Instead, as stated earlier, these discussions point to the substantial interaction that information about teachers' beliefs and principles can have with major areas of educational inquiry. But the interaction has a potential far greater than can be portrayed by even the most complete reviews of research endeavor. Teaching, as is well known of all human relationships, takes place in unique contexts and, because the act of teaching is a human one then the beliefs and principles of teachers represent a profound part of the context in which the act is engaged. Just as one cannot teach without holding beliefs and principles, neither can one understand teaching without knowledge of what these might be. The discussions of methodology and of the present study's design, both of which follow, are intended to pave one way to develop this knowledge.

Methodological Issues and a Resolution

Issues of Context and Language

Several issues of moment confront the researcher who is determined to learn something of the beliefs and principles used by others in their thinking. In their simplest form, three of these are the contexts in which one might probe for information, the language (and the meaning) which conveys the information, and the technique or techniques that can be employed defensibly to bring this information to light. A fourth issue concerns the relationship among these three: simply, again, because the issues interact, the resolution must exhibit a consistency of posture toward the identified research problem so that the arguments are clear and straight. These issues may be addressed by considering first the matter of context.

While no attempt is made here to link this piece of qualitative research to what has become known popularly in educational research as ethnographic research, there is guidance for the present work in what Spradley (1979) deems to be the essence of ethnography: "Instead of collecting 'data' about people, the ethnographer seeks to learn from people, to be taught by them" (p. 4). To do this requires that specific attention be paid to the context in which individuals live. Roberts (1982) makes this particularly clear when he carefully exposes the legitimate differences between qualitative and quantitative research in science education. Roberts draws on Pepper's World Hypotheses: A Study in Evidence (1942) to differentiate research styles according to metaphysical positions which hold differences concerning what counts as knowledge. Fundamental to one of these positions, contextualism, is the tenet "We have no adequate knowledge of an event. . .until we know the context in which it occurs" (Roberts, 1982, p. 279). The present study is contextualist in two ways: first, the study is contextualist in orientation because it holds that adequate knowledge of teachers and teaching depends on knowledge of context, and that beliefs and principles are an integral part of that context; second, it is contextualist in approach because, as seen below, every methodological problem is addressed by returning to contextual themes.

To study a teacher's beliefs and principles requires judicious choice of the context in which these are made to surface. If the intent is to portray a teacher's thinking about a particular classroom incident with the hope of uncovering principles which bear upon that incident, then considerations of context dictate that the inquiry focus methodologically and interpretively upon that incident and its context. Yet, if there is concern to broaden the domain of inquiry and to search for beliefs and principles which influence teachers' practice more widely than do single incidents, then contextual

considerations suggest that the context of inquiry be set at some distance from actual hour-by-hour, at the "chalk-face," classroom work. So context becomes significant in qualitative study for the perspective it gives to resolving questions about the setting in which the research will take place.

The significance of context extends further, though. In work where the primary mode of carrying information is ordinary language, attention must be given to context for that determines how the language becomes meaningful. A potentially confounding factor in interpreting the language of teachers in stimulated recall interviews and like settings comes from imposing contextual frameworks which are, essentially, those of the researcher, a circumstance noted above in the review of this research. Quite obviously, the closer one can get to a teacher's own verbalization of beliefs and principles, then the surer one can be of their integrity. But closeness alone is insufficient guarantee that the language which a researcher receives represents what he or she hears it representing, not that there can ever be certainty here. Opportunities must be available so that teachers can provide pieces of context within lengthy conversations, thus allowing for some corroboration. Thus, if some form of interview is considered appropriate to learning about a teacher's beliefs and principles because it provides a sort of distance from immediate and particular classroom incidents and appears conducive to broadening the domain of inquiry (as just noted), then the interviews need to be extensive in their coverage so that there are opportunities for all relevant contextual pieces to emerge.

Part of the problem of selecting an appropriate methodology comes from facing what might be involved in the idea of a person's beliefs and principles. It is not unreasonable to suppose that many if not most have an uncluttered and accurate perception of the beliefs and principles which drive

them to act as they do. Accordingly, having someone talk directly to the question "What are your beliefs about X, or principles concerning X?" is not only sensible at first sight but attractive too. Yet there are hazards in this style of questioning, the first of which is almost too obvious to note: there always exists the danger that responses to innocent questions may come from a perspective which is influenced by such thoughts as "What is it that he wants to hear?" "How will my response and myself look to him?" or "How do I wish to appear in his view?" Second, it is not necessarily the case that an interviewee might deliberately avoid genuine disclosure, but that he or she might not be fully alert to the power of such influences. Considerations of context, then, will interact with methodology at this level too, though the issue of alertness goes further because the possibility that a teacher is not alert to some of his beliefs and principles must be faced. The methodology must in some way permit these deeply held but unarticulated propositions to surface.

Repertory Grid Technique as a General Solution

Working with these problems leads one to conclude that the methodology for this study ought to rely on interviews which can prompt thinking about teaching and planning in a fairly broad fashion. The next step is to identify a particular methodology which has the potential for meeting these requirements. Just such a methodology is available in the Repertory Grid Technique originally developed by Kelly (1955) for his work on Personal Construct Theory. In all respects Grid Technique satisfies the methodological requirements. But it does more because there exists a theoretical consistency between the work of Kelly and the intent of the present research. This needs to be explored briefly before the methodological matters are taken up.

involves presenting the interviewee with cards upon which are written "elements" (such as: a teacher you liked, a teacher you disliked, your wife or present girlfriend, father, mother, etc.) which represent the domain or range of experience of interest to the investigator. As the elements are presented, the interviewee is invited to say which are alike and not alike and why. These discussions lead to the identification of constructs, such as "strong in character" and its pole "weak in character" (Fransella & Bannister, 1977, p. 11). The grid, with elements and constructs on each axis, is completed during the interview to record the associations provided by the subject, and is frequently analyzed factorially to show the relationships among constructs. This basic procedure has few rules, for it is an approach harnessed to a theoretical orientation rather than a prescription to be followed slavishly. Accordingly, it has been used in many different ways: sometimes the constructs are not elicited but provided; in other instances the grid becomes a rating grid; in Olson's (1981) study of teachers' constructs and curriculum innovation, five elicited and five prepared constructs were used in the grid; and, Ingvarson and Greenway (1981) used teachers' language for both grid axes.

On all fronts, the suitability of Repertory Grid Technique to the present study is undeniable. First, the selection of elements can be controlled by the researcher so that the domain in which the beliefs and principles operate coincides with the required wide-ranging domain of teaching characteristic of the teacher being interviewed. Second, there is opportunity both in the elements and the constructs to employ the teacher's language and so to minimize the contextual difficulties which result from using the researcher's language. Third, the possibility exists of using the results obtained from factoring the grid as the basis for deriving

Kelly's Personal Construct Theory holds that people construct their own realities in idiosyncratic ways and that the constructions consist of a finite number of dichotomous constructs which are employed to order, process and give meaning to events. Kelly's stance toward understanding people is readily recognizable as contextualist for he has taken the position that significant knowledge of individuals comes from comprehending the unique ways in which they see and construct their worlds. Beyond this brief account, it is not necessary to provide more detail of Kelly's theory since several accounts are available (e.g., Kelly, 1963; Bannister & Mair, 1968; Fransella & Bannister, 1977). But it is helpful to know that among the corollaries of his theory are:

> The choice corollary: A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system.
>
> The range corollary: A construct is convenient for the anticipation of a finite range of events only (Kelly, 1963, p. 102).

Evidently, Personal Construct Theory itself suggests something about investigating a teacher's beliefs and principles: the endeavor must be open to the likelihood of there being dichotomies in the beliefs and principles, with a possible "loading" on that pole which best orders his or her world; and the interviews must be directed so that the beliefs and principles which emerge cover the range of events characteristic of that teacher's perception of his or her professional practice.

The Repertory Grid Technique developed by Kelly is the vehicle for establishing an individual's personal constructs. Basically, it consists of a grid or matrix of cells in which are entered the associations made by an individual between his constructs and his experiences. The technique

information about "hidden" beliefs and principles, still in the teacher's language. And fourth, there is a consistency of posture between the theoretical backing to Repertory Grid Technique in Personal Construct Theory and the orientation of the present study--both are contextualist. The particular way in which the Repertory Grid Technique was used in the present study and pertinent details about the situation and people involved are described in the next section.

The Design and Conduct of the Study

The Site and Participants

Because contextualist research does not aim at producing generalizable results the site for the present study was selected for reasons other than those surrounding the idea of representativeness. Briefly, a suburban independent school district in central Texas which had experienced a growth from under 2,000 pupils to over 10,000 in the last ten years was selected because, first, it appeared interesting on those grounds, second, it was geographically convenient, and third, its administration was hospitable, helpful, and open to the idea of my working with its teachers. The school in which the participants were identified was selected on equally pragmatic grounds. The principal of the school at the top of the list I received from the school district's administration was busy when I telephoned, the principal of the second school was not. This school, a junior high school (grades 6-8) with an enrollment of just over 1000 pupils and a faculty of 46 female teachers and 14 male teachers, had just opened in the fall--a further factor of interest, all faculty being new to the school and freshly selected by the principal. According to the principal, the population of the school represented a full range of socioeconomic, ethnic and ability groups.

Participants in the study selected themselves by signing a sheet made available to them after a faculty meeting at which the study was described generally (in terms of finding out how teachers think about planning and teaching) and the time involved was declared (two interviews of about 90 minutes each). Fourteen teachers signed the sheet, and this number seemed adequate for the study, given the likelihood that the first one or two interviews might be conducted with an emerging methodology and might not therefore be too useful. The subject areas represented by the participants were Language Arts (3), Language Arts and Reading (1), Language Arts and Spanish (1), Language Arts and French (1), Language Arts and History (1), Earth and Life Science (1), Reading (2), Mathematics (1), Fine Arts (1), Orchestra (1), Migrant (1)--a remedial program. These teachers present a range of experience from the first year of teaching to the fifteenth. Three have Masters degrees, three are working toward their Masters, and one is working toward a doctorate. All the teachers in the study were female, and that no males agreed to participate may be explained by the fact that most of the male faculty were involved in coaching school sport activities and so would not have been able to participate in interviews which coincided with these commitments.

The general plan for conducting the study was to hold interviews with one teacher each week, from the time when participants were identified in early October 1981 until early February 1982, with some weeks excluded for professional development days, school holidays and the like. The intention was that the first interview would end with the teacher completing a grid, and that the second interview would be grounded on the grid's analysis; consequently, the two interviews with each teacher were spaced two or three

days apart to allow for grid analysis and for reflection on the first interview and planning the next. Both interviews were tape-recorded.

The Particular Methodology Exemplified

Undoubtedly the simplest way to describe the specific methodology employed in the interviews of this study is to avoid speaking in general terms and instead to work through an example drawn not so randomly from the data collected. By adopting this approach it is be possible to weave the issues discussed earlier into the case so that they lend appropriate context to an understanding of the procedures and, later, to the interpretation of the data.

The first interview with Grace (not her real name) began with questions that established the details of her professional background and experience. Grace teaches Language Arts and Reading in grades 6 and 8. She has nine years of experience in grades 6 through 10, has earned a BA in English and Government and a Masters degree in Curriculum and Instruction (English Education), and has completed half of her course work toward a doctorate in that area. Grace was then introduced to the tasks of the first interview as follows:

> The idea is for me to get some idea of the way in which you think about your teaching and your planning for teaching, and so forth, but to do this as much as possible in your own words. And the way I'm going to approach it is to suggest that we begin by having you just give me statements, brief statements, of what I might see were I to visit one of your classes. You could choose your best class which characterizes your best teaching in your favorite subject area of the two you have given me, and so forth. And they'll be statements such as "The teacher is

writing on the blackboard," "The students are taking a note." Those sorts of things which would be simply what I would see were I present.

The attempt in this statement was to have Grace focus rather widely on not just her teaching but on what she believes to be either her best or most characteristic teaching, it being likely that the two coincide and so usefully define the domain of application of whatever principles and beliefs emerge. In Kelly's terminology, the brief statements that eventuate proscribe the range of convenience of constructs; later they become the "elements" (Kelly's term) of the Repertory Grid. As Grace began to describe what I might observe, I wrote the brief statements on 3x5 index cards and I invited her to check that the wording corresponded accurately to what she had said. The statements, listed in Figure 1 in the order given (with abbreviations used in the interview by me), are all Grace's with the exception of number 16 which was added by me because Grace had been talking about class discussion but had not indicated who chaired this type of activity. When the flow of statements slowed I suggested that about 20 would be a useful target, and Grace appeared satisfied with achieving that number. At this point Grace was told:

> What I would like you to do now is to take the cards and group them in ways that you think sort of belong, in your perspective. You may have as many groups as you wish. And then we will talk about the groupings.

In typical uses of the Repertory Grid Technique, constructs are generally elicited during discussion of the groupings. This procedure was followed once in this study (with the first teacher interviewed) and it proved to be unsatisfactory for I got the impression that I was hurrying the construct elicitation to the extent that the beliefs and principles which we came to settle on were rather superficial and were seemingly represented more by my language than by that of the teacher. The difficulty was surmounted

when I realized that the language used to discuss the groups of cards could be employed on the construct axis of the Repertory Grid so that resulting factors could become the vehicles for eliciting deeper beliefs and principles in a second interview. This procedure quickly became integral to the whole study.

Grace arranged the cards in seven groups, a rather larger number than arrived at by most participants in the study. As each group was discussed in turn, the terms and phrases which Grace used either to distinguish groups or to characterize the similarity of cards within the same group were noted down. During this portion of the interview I probed for the meaning or significance of the phrases so that superficial ones such as "this is what the students do and this is what the teacher does" would be replaced by more profound ones. In most cases, the number of distinguishing or characterizing phrases given by participants in this phase of the interview was somewhat less than the number of cards. The discussion of Grace's groupings led to 18 terms and phrases which became the entries on the "construct" axis of the grid. Grace's phrases are listed in Figure 2 for the sake of completeness, yet without knowledge of the context being generated by Grace and myself, many of these will appear odd or meaningless. For example, number 3, "Ss need some protection," flows from Grace's sensitivity to students' feeling exposed when they make a presentation to the class; and number 10, "Ss read poetry line by line," is not simply a statement of the obvious but a reflection of Grace's concern for choppy and literal reading of poetry which she has found to be normal at this age level.

At this point, the discussions of the first interview ended and the grid was explained. Numbers corresponding to the numbered "elements" cards were placed on the element axis of a blank grid, and the distinguishing and

characterizing phrases were written in on the "construct" (Kelly's term) axis. Grace was asked to take each "element" card in turn and rate the association it had for her with each phrase on the "construct" axis, using the scale, "3" definitely associated, "2" neutral, "1" definitely not associated. Grace's completed grid appears in Figure 3. When the grid was complete, the interview ended and Grace was informed that the analysis of the grid would be the basis for discussions in the second interview.

The operative assumption at this point in the procedure is that the terms used by Grace to distinguish or characterize the groups of elements are representations at one level of some set of coherent beliefs and principles (at another level) about her teaching, and the immediate task becomes one of determining what these might be. Presumably, coherence is reflected in the grid's scores of association. That is, if the distinguishing or characterizing phrases in the "construct" axis are thought of as "variables" and the "elements" as "subjects," the correlations among variables could be factored with the reasonable expectation that the "variables" which exhibit some commonality will be placed in the same factor. Accordingly, the grid is subjected to a principal components factor analysis with varimax rotation, using a "packaged" program (Veldman, 1978). The resulting factors, which are simply groupings of Grace's distinguishing and characterizing phrases are listed in Figure 4.

The objective of the second interview was to identify whatever beliefs and principles underlie these factors or groups, as they were called in the interview itself. The interview began with a brief and non-technical account of how the grid was analyzed to yield the groups, and continued with questions and discussions aimed at understanding the groups and how Grace sees them. Later in the interview, Grace was encouraged to find ways to

label the groups and to talk about where she thought the ideas represented by the commonality of each group came from (the latter is not reported here). The interview is long (about 90 minutes) and intensive, so just a few lines are reproduced here to show how Grace attached meaning to each group. In the normal circumstance of analyzing the interview, the substance of the total interaction is employed in the attempt to identify the underlying beliefs and principles. In other words, the fullest context is heeded.

Grace began discussion of the first group with, "I think they all hinge on that second one, 'thinking skills,' except for 'needs some protection.' I don't know how that entered into that section." And the response to this remark is not untypical, "Could you explain why 'student participation' hinges on 'thinking skills'? What do you see to be the relation there?" Here are more of Grace's points made throughout this discussion, though not consecutively:

> . . .developing thinking skills requires student participation. . .If I am just telling them things, they are not really developing thinking skills. They need to be involved, in other words. . .By developing their reading skills, they are developing thinking skills. . .Well, the speaking in public would require that they think on their feet, so to speak. Sometimes they would have to ad lib and I would again put that in a category of thinking skills. . .If everything originates with me and the students have less input and everything that is happening is teacher dominated, I don't feel like the students are developing their thinking skills. They need to as I said earlier be participating. . . You can do anything if you have developed these thinking skills. . .To get students involved in what was happening rather than to spend much time lecturing.

The first group of phrases which Grace discusses here contains an evident contrast between the idea of having the students involved mentally and the notion that when the teacher is lecturing the involvement is minimal. The principle or belief which seems to capture what Grace is saying concerns the importance of developing thinking skills versus teacher lecturing. Interestingly the principle seems to cut across an objective and a particular style of teaching, almost as if the principle has to do with avoiding a lecturing style in order that the teaching can contribute to the development of these thinking skills.

A contrast is evident in the second group of phrases, too, though it emerges under the rubric "arrangement for learning" and pits individual work against group work. Here are some of Grace's explanations for this grouping, again taken from the second interview.

> I picture the students sitting in groups of five or six in a circle and working on their listening skills, responding, talking about one topic perhaps, and responding only after they had listened and responded to what they had been listening to, rather than just talking out. Of course, here they would not be developing interpersonal skills, but they are doing their creative work silently, and I would suppose that anything they do is in some measure related to spelling except for oral work. . .Because their creative work silently would be probably writing. . .Well actually, it should be related into this because through this as I say, if they are working on their listening skills, they can only respond to after listening and thinking about what has been said, and that would be one of the activities that we would do to develop thinking skills. . .It is important that you have them arranged in a way in which they can work, and also that you don't have ones that might interfere

with another one's learning. . .You need to know how your time is going to be carved up. . .(monitoring) trying to make sure that everyone has the opportunity to speak. Make sure that everyone is participating. . .I try to concentrate on making sure that they are working toward a goal. . .John Dewey was right. He is the one who probably first suggested or not first but who at least brought it to our attention that certainly much of what we do during our lives requires working with other people and the better we are able to do so the more we will accomplish. . .I don't think of the individual versus group, I think both are necessary. (The interviewer asks if this is a management for learning dimension or speaking of types of learning.) Could it not be both?. . .I would guess it has both.

Throughout this discussion, Grace's thinking here seems dominated by a view of the relationship between the sorts of learning that are to occur and the arrangements which are appropriate for this learning to occur. The principle then is a principle concerning arrangements for learning with an evident contrast being made between individual and group work.

The contrasts which characterize the first two factors or groups are simply not evident in the discussions of the third group. Here Grace demonstrates a concern about the point at which she should intervene when students appear to need assistance with their learning. If a contrast is needed it could be supplied, and it might well take the form of a contrast between students needing help with their learning and students learning by themselves.

I would like to do that (getting into the instruction) so that they don't begin to think that if they didn't understand what something that

they have read in the way that I talked about--they don't feel that their understanding is in any way inferior because certainly we all, as Louise Roseblat says, we interact with the text. . .They have been taught that there is only one meaning, one answer to a comprehension question and so they don't dare go beyond that. . .I think these (dramatic continuity, alternative interpretations) are the points where I need to intervene rather heavy-handedly because it is probably something that they will not--information they would not arrive at.

The remaining work that is performed on the data following the conclusion of the second interview consists of an interplay between the substance of the interview and the principles and beliefs which seemed to emerge, in an attempt to ensure that the language and intent of these cohere as much as possible with Grace's thinking. Briefly, for the context provided by Grace in the "elements" of the first interview, her thinking is dominated by the significance of thinking skills and how her lecturing might impede their development, by the importance of arranging youngsters in groups or as individuals to enhance whatever learning is intended for them, and by an ongoing concern for the appropriateness of her intervention as they learn.

This use of Repertory Grid Technique uncovered the principles and beliefs of all participants so far as the elements they provided are concerned. As we have seen here, and as is evident in later sections of this paper, the principles are not necessarily formulated as principles of action, nor are beliefs necessarily worded as propositional statements about the nature of affairs. This does not mean that they may not operate for the teacher in these ways; instead, the formulation of the principles and beliefs reflects what the teachers say or what may be inferred legitimately from what they say. Of course, the principles and beliefs may be rephrased suitably;

but, for the present they are best regarded as phrases, statements or terms which convey significant meaning to the teachers and to us about their professional activity.

Two Remaining Methodological Difficulties

Before this paper can move toward a broader discussion of the results from the study than can be gleaned from the single case of Grace, it is necessary to consider two types of problems which arose within the methodology. One of these pertains to the factor analyses of the grids, and the other to the qualitative identification of beliefs and principles. Both types of problem, discussed below, serve as qualifiers or limitations of the results of the study.

An unexpected problem arose in the analysis of the second teacher's (Betty's) grid. Not until an analysis was unsuccessfully attempted was it noticed that four of Betty's distinguishing or characterizing phrases ("constructs" in Kelly's terms, "variables" in terms of factor analysis) were scored identically on the matrix. The analysis was rerun with three of these variables removed, only to be inserted after the factor pattern was found. This analysis resulted in four factors where the fourth did not appear consistent with what had been said in the first interview. A second analysis, with three factors specified, produced factors that appeared consistent, and were thus used as the basis for the second interview. Even though the second interview led to three apparently strong beliefs and principles, one is left with the uncomfortable feeling of wondering how different they may have been had four rather than three factors been used. (In other analyses, with exceptions noted below, the "all factors" option was selected, and that number of factors used in the second interview.)

A second problem in the factor analytic treatment of the grids was noticed in Christine's grid after the initial factor analysis had been used for the second interview. It was found that Christine had scored "3" for each element against one of the variables so that it had no variance. The program accepted the data but did not include that variable in the factors. An attempt to explore the consequence of this problem after the fact, by artificially introducing variance, led to a quite different factor pattern. Thus, although Christine's second interview possessed its own integrity, the extent to which the interview would have yielded different beliefs and principles were the missing variable present remains unknown.

The same problem was found in Ellen's grid, but before the analysis was undertaken. It was resolved as follows. An "all factors" analysis was performed yielding six factors, this was followed by a five factor specification. Next, a minimum of variance was introduced to the variable having no variance in a way which corresponded to another variable with which it corresponded closely. The matrix was then analyzed with the following specifications: all factors (seven resulted), six factors, and five factors. The first two and second three sets of factors were compared and it was found that the six factor specification resulted in an exact match with the six factors obtained before the variable was modified, save for the presence of the additional variable. Accordingly this analysis was selected for use in the second interview with considerable confidence.

The final problem in the factor analysis portion of this study arose when a grid of 20 "variables" by 19 "subjects" was produced by Kathryn. When two identical variables were collapsed a singular matrix resulted which was rejected by the program. The decision was taken to drop one variable, perform the analysis, and then reintroduce the variable in the pattern of

four factors which resulted. The variable that was dropped from the analysis was "Love and understanding (are) good for them to read about." As it happened, this phrase emerged in the first interview together with two others ("Learn point of view and imagery" and "Have a meaning to the child") in the context of aims for Language Arts. When the factors were examined it was found that only one contained "variables" relating to Language Arts, the remainder referring to the other subject Kathryn taught, History. So the decision to place the dropped variable in the Language Arts factor was entirely defensible.

The second type of problem which constantly harasses qualitative research of this nature concerns the movement between the different parts of the data and the theoretical approach which drives its acquisition. The theoretical orientation here, a mixture of contextualism and Kelly's Personal Construct Theory, suggests that one should be alert to the possibility that beliefs and principles which emerge may well exist for a given teacher as bipolar constructs, even though they may not manifest themselves as such in the factor analysis for the second interviews. Should, then, the interviewer look for poles when they are not immediately apparent? Of course, one can readily construct the opposite pole from the content of the particular statement, but that is another matter. Germane to this issue is the uncertainty one harbors about the effect that the groupings have upon a teacher's thinking when these are presented for discussion in the second interview. The contextualist position acknowledges the significance of varied information from several sources, and so one constantly seeks corroboration for beliefs and principles throughout the data. In all cases studied here, the emerging principles and beliefs appeared coherent for each

teacher. That alone is an important signal of the credibility of the results.

Some Initial Results of the Inquiry

Despite the knowledge one has about contextualism and the nature of case studies, it can be tempting to think that some general findings might emerge which could be reported neatly and succinctly. Yet the data collected in this particular study, being in fact the data of 14 case studies, jeer at such a dream. On quite different grounds, there ought never to have been that expectation: we learn in our training that it is improper to hold expectations about the results of our studies. But in a study like this, such a fiat of research etiquette is impossible to meet because it cuts in both directions: the results must point to generalizations or to particulars, and it is hard to hold that certainty at a distance.

One way to approach the results is to note the contrast between generalizations and particulars and to use that notion to think of the data. For instance, one might reasonably anticipate that teachers of the same school subject might share at least one or two principles and that teachers of different subjects would have less in common, but the data contest these assumptions. Also, it is tempting to suppose that where similar terms are used in the principles of different teachers, then the principles themselves are similar, but this is far from being the case because the terms reside in different if not contrasting contexts. A particularly fascinating contrast is apparent in the poles of bipolar principles. Grace, for example, contrasted a goal (critical thinking) with a teaching style (lecturing), while Heather contrasts a goal (basic French competence) with another goal (cultural and contextual awareness, which she perceives as extra-curricular).

Contrasts such as these can form a useful perspective for reporting the results because it becomes possible to present a rather broad picture of the beliefs and principles just so long as we are mindful that we are looking as much at contrasts as we are at similarities, and that we are overlooking idiosyncratic meanings.

A Broad View of Teachers' Beliefs and Principles

To begin, it is necessary to describe the extent of the data for this is the essential context of the broad description attempted here. Remembering the decision to ignore the work with the first teacher on the grounds that these data were collected using an early version of the methodology which proved unsuitable (even though the data themselves are interesting in their own right), we are considering the principles of 13 teachers. The number of principles emerging from the interviews with each teacher is not uniform--a further factor which militates against generalizations and, at the same time, makes reporting difficult. Four teachers evinced three principles, another four demonstrated six, while two teachers demonstrated four and the remaining three teachers gave five principles or beliefs. But any clarity one might draw from examining these 59 beliefs and principles evaporates quickly because 32 of them appear in the data as clearly bipolar, giving 91 pieces of language each being unique by virtue of terms or context.

The only satisfactory way to present something of the content of these principles is to generate a category system that can handle their variety. But this approach holds a risk to legitimate qualitative inquiry, namely the extent to which the category system can influence the data. For this study, there are two ways in which the risk is not only minimized but vanquished. First, as I suppose in all qualitative research, special effort needs to be taken to ensure that the data themselves speak to the way in which they are

categorized. This becomes not a matter of tampering with old categories until a fit is achieved, but of producing and discarding new category systems until one emerges as clearly the leader in giving the data their voice. Second, how the category scheme is used is understood by the reader's context, and pains have been taken to make it clear that the picture given by the categories is a broad one that necessarily fails to show the richness and individuality of the principles it tries to describe.

The category system itself consists of five categories: goals, which include both academic and non-academic, and also references to principles which appear to flow from considerations of subject matter; management, which is conceived broadly and so includes principles that speak to time and behavior and also those which mention evaluation and student involvement; teacher needs, which appear as quite personal; student needs, which are directed at either personal or academic needs; and the facilitation of learning, which becomes the place for collecting all beliefs and principles that appear to be operating for the teacher as "rallying points" for thinking about immediate instructional matters. The categories, then, are used in this report as places to collect beliefs and principles which apparently exhibit some commonalities. So it is that when Deborah identifies a group of phrases with the statement "why the teacher controls" and so shows that control is an important part of her thinking as a teacher, the underlying principle here is seen as similar to Marsha's expression "teacher dealing with a class formally and with authority and organization." Both teachers appear to attach much significance to the locus of control, even though the principles are uniquely expressed.

The result of using the category scheme appears in Table 1, but before the table is discussed, two further complications arising from the effort to

portray these data broadly need to be mentioned. First, as already noted, many of the principles and beliefs held by teachers are formulated as dichotomies. Joanna, for example, articulates a principle which connects reading, self-concept and autonomy while, at the same time, placing autocracy in contrast. In discussion she demonstrates conviction that "low esteem and self-concept lead to poor performance," and while she does not see this as a "black and white situation" she seems to see enough in reading as a "human, personal experience" to find it quite inappropriate to think of herself as "I am the head of this class and whatever I say goes." Categorizing such a belief or principle is awkward for it appears to belong in two places: part belongs in the category about facilitation--specifically, self-esteem facilitates learning; but the other part belongs in the management category under locus of control. (In Table 1, this principle is entered as "2+" beside locus of control, and "2-" beside self-esteem, to indicate the bipolarity of the principle.) A second complication arises when it is found, as in the case of Deborah, that the pole of one principle belongs in the same category as another principle. Of her second principle, "Efficiency of reading and motivation," she said "but above my goal for them to be more efficient readers, I really would like for them to enjoy reading," and the theme of enjoyment is pressed to the point where its place as a principle about extra-curriculum personal goals is clear. Yet as the discussion of efficiency of reading develops, it centers on the ability to scan rather than fastening on each word, and the works of Kenneth Goodman and Frank Smith are cited. Here, then, the "efficiency of reading" pole is appropriately placed in the subcategory "principles from subject matter," even though Deborah's third principle "vocabulary increases reading competence" belongs here too.

Table 1 is the consequence of attempting to categorize all the principles and their poles. As must have been noted by the reader, it is very unsatisfactory for any purpose other than providing a broad picture, and so it is used for just that, even so, with care: the expression of a teacher's beliefs and principles here is essentially out of the context of the interviews and of other principles evinced by the same teacher which makes them idiosyncratically meaningful.

If one were to ask what appears to be uppermost in the thinking of the teachers here, he would be bound to speak in terms of goals. Given that 32 of the 59 beliefs and principles are definitely bipolar, one can point to the fact that 25 of the 91 entries in the table mention goals. Interestingly, specific curriculum goals (those harking to the content to be learned or skills to be acquired, as the jargon has it) do not appear to be exclusively in the forefront of the teachers' thinking, for the teachers demonstrate genuine concern for extra-curriculum academic goals (such as Ellen's view about the significance of "making them think" and of having students successfully use resource materials), and for what are termed here extra-curriculum personal goals, which are well exemplified by Heather's concern for the current development of sixth graders "they are still at the age that they like to come up and hug you and that is fine, I love that," and by her determination to make them responsible and independent so that they can handle revolving schedules and go into different classes, ". . .we have to make them grow up" is her way of putting this. In their thinking about teaching, few of the teachers appear to employ principles that derive from the subject matter of the curriculum, directly at least. Deborah's views of the nature of reading have already been mentioned. Kathryn, who teaches History and Language Arts, talks of the need to make History coherent by

which she means that students need to be given an order to History which has been for them in lower grades a series of out-of-context and disorganized stories.

In this group of teachers, the fashion in which beliefs and principles germane to management arise are varied. For Christine, managing time is important: "Management of time contributes to learning." But she is alone in articulating this particular principle. Typically, I suspect, we would anticipate issues of management to be aired in terms of student behavior, or even misbehavior, and in five cases this is true. Betty put it this way, "I don't like to see students who are not interested because they are usually distracting from (sic) someone who otherwise would be interested." And Fran expresses concern for behavior also, though the emphasis for her is upon manners toward everyone in the class, not just toward herself. Management, though, comes to light in two other important ways (its appearance in Evaluation is less important save to note Ingrid's concern for the institutional demands that evaluation places upon creativity in Fine Arts). First, many of the teachers spoke in terms of where authority lies in their perception of their teaching. Fran and Marsha seem to view themselves as the ultimate authority when it comes to decisions about procedures, lesson content and assignments, though both temper this belief with genuine feelings for their students. Joanna, as already noted, sees autocracy as detrimental to the development of reading (since one's reading is so intensely personal to her), and Grace pits the significance of the development of thinking skills against the opportunity for their development if the students are obliged to listen to the teacher without being engaged.

The "Student involvement" subcategory is the place for another of Grace's principles: that arrangement of students either in groups or

individually is related to learning. Here, the emphasis is on the appropriateness of different modes of involvement, "...if they are working on their listening skills, they can only respond after listening and thinking about what has been said." A similar focus is evident in Nora's work in the Migrant Program which she perceives as necessarily tutorial, one-on-one, for that's its character if it is to meet its charge.

Notions of management, in all this variety, and concerns for aims of several sorts appear to dominate the thinking of the teachers studied. The contrasts here are equally evident in the other sorts of principles. Of these, the most unexpected are collected beneath "Teacher needs," and their range is informative. Marsha talks of her demeanor in the classroom by contrasting what she styles "the Mom side of me" in a full and caring sense with situations in which she could not let this out. Of "running a band," which she doesn't, she observes ". . .I would be totally frustrated by the fact that I could not have physical contact with the kids like I do now." A similar view is evident in Fran's principle about the pervasiveness of a sense of personal relationships which, for her, characterizes the way she approaches her work and students. Needs of a quite different type are expressed by two others. Ingrid finds great frustration in dealing with the fallout of what she perceives to be the prevailing view of Fine Arts: It "is an elective course and it is a dumping ground for the students that if they don't know where else to put them, throw them in art, they can cut and paste." The need to resolve this frustration permeates her discussion, "I'm tired of putting up with things I don't like." Joanna, though, signals a very different need when she speaks not just of holding a wealth of professional knowledge, but of putting it to use. "I really want to know everything that I (can) about what I am doing. . .If I'm going to be

effective, I've got to know how to do it. And if I really care about what they are doing, I have to be efficient."

While Table 1 suggests that, overall, little attention is given to student needs and differences, this is more likely an artifact of the category system itself rather than a comment on where the thoughts of teacher dwell. Here the difficulty is one of interpretation, because many of the teachers hold beliefs and principles which suggest that they are sensitive to students' needs, frequently in the personal domain. In many cases, though, these sensitivities find expression in beliefs and principles which more adequately suit the subcategory "extra-curriculum personal goals" and, to a lesser extent, "student involvement." Accordingly, it would be a mistake to employ the number of entries in "student needs" as an index of the teachers' voicing concern for these, and the mistake is simply a matter of information used out of context. Student needs are attended to, then, in such principles as Joanna's determination to be closer to the students, to be firm and caring which for her will rapidly reduce behavior and attention problems by making these out of place in the atmosphere she wishes to create and sustain. Also, student needs appear twice in Heather's principles. First, she is concerned not to overwhelm the students in her presentations, and second, she is concerned to "learn" the students through feedback of several types which she calls evaluation.

The final category, to conclude this broad picture, is of beliefs and principles which seem to be employed by the teachers in their thinking as guides to teaching and planning. For example, the references to self-concept or self-esteem throughout the interviews is plentiful enough to suggest that this notion is thematic. It appears as very straightforward support for instructional technique, then, in Christine's crisp principle "Self-esteem is

necessary for learning. . .Well, I think it is obvious really, that a student has to feel good about himself, about who he is and who you are before any learning can take place." Other principles in this category demonstrate again the variety which flows through the preceding discussions. Ellen views group work as "another, different way of learning" in which, of course, additional and different understandings may be acquired. Heather articulates a principle of personal style, apparently designed to result in a sensitive and student-oriented classroom,"This is just a lot of student input. A lot of student participation. . .There is no way I can make them learn. . .I am there to teach them, but for them to learn they have to take some of the responsibility." And this view may be contrasted with Kathryn's principle about the need for personal organization or order: "It's to get them to think about keeping things together and about keeping it in order. It's something that they have to learn before they can go on and learn other things. . .So I think that that is really a useful learning technique in that they must be able to keep it together to get a logical picture."

This general account of the data serves to show clearly the complexity and variety of the beliefs and principles which were extracted using the present methodology. But it does more. It demonstrates that an attempt to force idiosyncratic and contextually meaningful statements into rather coarse and ambiguous categories can lead only to a dilution of the data's power. The power of these data lies in their context, and the meaningfulness of any of these beliefs and principles emerges fully only when we can picture all of them held in concert. This is no more than another way of saying that if we are to learn from these teachers we must abandon the broad picture and deal more directly with particulars in some selected and specific contexts.

A Second and More Intensive Look

It simply is not feasible in this paper to discuss the beliefs and principles of all 14 of the study's participants in the depth that would do justice to the integrity of contextualist research and, contemporaneously, would draw attention to all the tensions and contrasts that are there for the seeing. Accordingly, some very pragmatic devices are needed to select cases which can reveal something of the data's richness and power, and of the considerable variety which characterizes the beliefs and principles located therein. The easiest way to convey all of this is to focus on four of the teachers who have responsibilities in Language Arts, a useful decision since two of these have already been discussed: Grace earlier in this paper and Fran elsewhere (Munby, 1982). These four cases are presented by first introducing Fran and recalling Grace so that some of the obvious contrasts are seen. The range of contrasts is then increased as Betty and Christine are added to the picture. Naturally, these discussions are limited in the range of evidence that can be presented, yet there is sufficient for the key principles to take life and illuminate the fundamental differences in the thinking of these four professionals.

Fran and Grace

Fran is completing a Masters degree in English and has taught Language Arts for 12 years. Her present assignment is grade 7, though she has experience with grades 2, 3, 4 and 6. Five principles were identified in Fran's grid, and discussion of these in the second interview led to seeing them as follows, with poles indicated by "vs.":

1. The job that has to be done (curriculum) vs. the sensitivity
2. Purposefulness (task orientation) vs. management (manners)
3. Participating and sharing

4. Personal approach to self and a sense of relationships

5. Why the teacher controls

Throughout these principles, Fran demonstrates the significance to her thinking of feelings and of relationships with others, especially her students. So, while a curriculum aim appears in the first, it is set off against a sensitivity to how students might feel about doing some things which they do not particularly like to do: "They really do marvelous things . . .when they know you have either literally or figuratively put your arms around them." Similarly, while management features in the second principle, it is very much a matter of conduct or manners toward all in the room. Her views about feelings arise in the third principle too, for although it speaks to her belief that genuine opportunities for participating, responding and listening are vital to learning, there is still the affective undercurrent, a "sense in which we are all in it together." The fourth principle clearly establishes her "person" orientation: "only in give and take can you realize a sense of relationship," and "somehow we find a way to say funny things and to laugh at ourselves. . .we laugh a lot at what we have to learn." There is an element of toughness in Fran's principles (she calls it "tough love") and it surfaces as a professional commitment in the final one. Of her role in selecting poems and short stories for her students she says, "No matter how bright they are, they are not at a point in their life when they can make a valid judgment of what is or isn't good." Accordingly, she chooses carefully to give them a useful starting point. Fran's discussion of this principle indicates that it is thoroughly worked out and balanced by her sense of personal relations in the classroom.

It is interesting to compare this picture of Fran with Grace. Her principles, as already discussed, are:

1. Developing thinking skills vs. teacher lecturing
2. Arrangement for learning: individual vs. group work
3. Teacher intervention when students need help with their learning vs. learning by themselves

What seems close to the surface in Fran's teaching is simply not evident in Grace's principles. Where Fran appears to give prominence to understanding what might be important about feelings and relationships among people, Grace seems to be listening instead to ideas about the intellectual growth and learning of the class when she considers her teaching. The difference between the two first principles of each makes this quite plain. Both teachers have academic goals in mind here, but Fran's contains a contrasting pole which directs our attention to her sensitivity to others while Grace's pole contrasts a style of teaching she finds inconsistent with the development of the academic goal. This should not be taken as suggesting that Grace does not care for her students, because she evidently cares for them though in a different manner than does Fran. Grace's concern for them lies in her third principle and it emerges as she deals with the dilemma that likely faces all teachers: at what point should she intervene? Interestingly, the focus selected by Grace to answer this question is on learning and of a very particular sort. There is evidence in the transcript of the second interview with Grace to support the view that her conception of learning is interactionist--learning is a consequence of individual interactions with text and information. There exists in this conception a definite signal that Grace has significant concern for the intellectual individuality of each student.

Betty

Betty teaches Language Arts and Spanish in grades 6, 7 and 8. She is working on a Masters in education and has taught grades 3 through 8 in her four years of professional experience. It will be recalled that the "all factor" specification was discarded in the factor analysis of Betty's grid in favor of a three-factor specification which gave a very close coherence with the material of the first interview. Of contextual relevance too is the fact that the language used to depict the principles is mine. (At this early stage in the study, I had not thought to have the teachers label the groups.) The reader may judge the consistency of the groups and the labels selected for them from Betty's phrases (in Figure 5) and from the discussions which follow. The principles are:

1. Direction (of the class): Teacher vs. student
2. Student involvement vs. non-involvement
3. Management vs. attention

Listening to Betty is instructive. About the first group (or principle) she says:

> The teacher is kind of running the show. I guess what you'd say has complete control over what is going on and has direct control of the class. . .Just be right on top of them. . .I have to be standing up lecturing, or say "Here is an assignment. Do this." give them implicit (sic) directions on how to do it, and then check it with them immediately after they do it.

These statements are later circumscribed by concerns for the students' being responsible, so I ask, "Is their being responsible important to you?" Betty replies, "I feel it is a very important characteristic to build, just in life generally."

Knowing who is directing the teaching is important in Betty's thinking, just as it seems important that the students attend to directions and carry them through. There are tinges here too of the significance she attaches to her direction, though other principles speak more closely to this.

Betty's discussion of the phrases constituting the second group (Student involvement) contains the statements:

> They (the students) have a tendency to daydream. . .If they are actively involved in participation, question and answer or having to get up and do something on the board or something like that, they don't have as much time for their mind to be occupied by other things. . .Well, a student has to be paying attention if he is absorbing anything in their (sic) brain, to learn anything. . .They just sit back and take in information, hopefully, with, like this, their minds cleared of any thoughts that are blocking what they are supposed to be thinking about--thought processes.

A notable feature of the discourse here is its origin in a conception of learning in which the mind apparently is to be cleared before it can receive. The view may not simply be that learning is passive reception but it is the case that the view is widely different from Grace's interactionist position. Also, given the first principle, there is a hint in Betty's view that learning either should or does flow from teacher to learner or is in some way controlled by the teacher, whereas for Grace (in her third principle) there is the understanding that students may learn on their own without a teacher's intervention.

Betty's third principle brings some clarity to the conception of learning operating for her. The principle is a management one, the emphasis being on behavior, and as seen in Figure 5 the one phrase that is in contrast

to the others (which are presumably reflections of undesired classroom behaviors) is "Ss pay attention." These extracts from the second interview are germane:

> I don't like to see students who are not interested because they are usually distracting from someone who otherwise would be interested. . .I don't like to see students who are blatantly, I guess you would call it blatantly disruptive. . .if a teacher is genuinely interested in students and shows those students that she cares about them individually, and their progress and how they are progressing in class, that student is gonna want to please that teacher.

Betty's concern for disruption is fashioned from a concern not unlike Fran's, though the appeal here is to distracting others, where it is to a deference toward fellows for Fran. There is another difference too and that is to be found in the perspective that Betty has on the practices which can eventuate in students' performance. For Fran, we recall, the literal or figurative hug seemed appropriate. For Betty, the reasoning is that being genuinely interested in individual students and their progress leads first to the wish to please and this, we might infer, is fulfilled in learning. On the surface, both approaches coincide at the stated level of concern or interest in others. Yet one cannot avoid being struck by the contextual difference here. Fran's principles keep returning almost compellingly to a theme of other-directedness which is less pronounced in Betty's list.

Christine

Christine teaches Language Arts to grades 6 and 7 and has taught that subject for 4 years in grade 7 through 12. She has earned an MA in English. The list of principles and their component phrases from our interviews appears in Figure 6. The language of the principles, as in all cases save

Betty's, is Christine's but there is another contextual point to note: although it was clear to Christine, it was never clear to me that two principles explained the first set of terms; nevertheless, it was important to follow her lead. The principles are:

1. Self-esteem is necessary for learning
2. Learning follows competent questioning
3. Management of time contributes to learning
4. Teacher must be assertive and discipline
5. Students control the listening
6. Ideas and concepts better learned if all forms of instruction used

If there is a concise way to depict Christine's thinking it is to point to a balance between the focus on herself and on her students. The views expressed in the first and second principles exemplify this well. The first focuses on the student, with a sensitivity not unlike Fran's:

> Well, I think it is obvious really, that a student has to feel good about himself. About who he is and who you are before any learning can take place. Especially at this age, they are so self-conscious about the physical changes taking place and about what their peers think.

The second principle, which Christine found within the same group of phrases, illustrates the focus on herself and on what she sees as her responsibility. At first, the principle "Learning follows competent questioning" has a straightforward "tips for teachers" ring of authority to it. But as we hear Christine talk of it, we can see its unique meaning to her.

> I'm hoping that first of all that they see that I am an inquiring person and I try to show them that I am interested in everything. . . learning is a lot of times explaining about everything and that also by

my asking questions that I am hoping it will help this part that students don't know how to ask the right questions. If they see me asking good questions, then they have that as a model. . .Well, knowledge is like memorized facts, but it is also understanding concepts and the wisdom of experience and all sorts of things. . .More open-ended questions lead to more consideration by students. . .Questioning leads to knowledge, which is learning. . .learning is finding out about everything.

Not only does this principle convey something of Christine's determination to ask useful questions, but it also carries her view of the nature of learning and knowledge, and her view of what she believes she ought to be as a teacher. Learning is an active "finding out," not just memorizing, and can be assisted by the teacher's modeling an inquiring person.

More of Christine's view of the teacher's role in promoting learning is evident in the third principle "Management of time contributes to learning."

> More learning can take place when the teacher facilitates learning by being well prepared, being ready to teach as soon as the bell rings. A lot of it has to do with organization and time management. Disorganization really does bother me. Wasted time really does bother me. . .Their (two colleagues) classrooms were so orderly and their kids were enjoying themselves and there was good rapport between the pupils and the teacher. They showed me how to manage the classroom and how to present some of those things so I would get the results that I wanted. . .If you don't know what you are going to present, or if you don't have it ready, or you're not ready to go. . .it's sort of like live television, when they cut on the camera, you're on. This is it. And if you are ready the results will be good, and if you are not ready, the

camera is still going. And if the kids see that you are not prepared and if they have to wait then they will find something to do.

This view of management, centered on time and organization, is not so detailed in Fran's "task-orientation" and has no counterpart in the principles of Grace or Betty. True, Betty speaks of management, but the emphasis is on disruption, not unlike Christine's fourth principle, "Teacher must be assertive and discipline."

> I learned to be an assertive parent first. . .but these two other teachers said "Yes, you can expect this. You are not being overly demanding. You have rights as a human being.". . .And so, I also took a course on assertive discipline which by that point just affirmed what I had figured out on my own.

Christine has worked out with the help of colleagues a view of the rightness of being assertive in terms of herself. This view is unlike Betty's concern for general distraction, and is more in tune with Fran's notion of manners and respect for others.

The part of the second interview with Christine which dealt with the fourth principle "Students control the listening" was particularly interesting:

> By not being active listeners or by not being attentive or concentrating on what is happening, they lose their specific instructions. . .They (younger students) are not as astute in their listening, and so I find myself repeating a lot, much to my dismay. . . If a student is busy thinking about something else, there is nothing I can do to make contact, and they will turn right around and ask the same question I just answered. . .I think it is

probably their immaturity. They are so self-centered that whatever concerns them is always number one.

There is a sense here in which Christine has come to terms with the limitations of any attempt to teach. Youngsters can and do, legitimately, get preoccupied and so remove themselves from what is being said in the classroom, and she acknowledges this. Of the other teachers considered here, only Betty has inattentiveness on her mind apparently, and she speaks of it almost as if it is an obstacle to be surmounted rather than a fact of classroom life to be noted and understood.

Christine's last principle "Ideas and concepts learned better if all forms of instruction are used" appears to have grown out of reflecting on her first year of teaching in light of some general perspectives on attention and learning. The principle is a straightforward message of intended instructional plan:

> I took that textbook and I clung to it even when I knew in my heart of hearts, this thing stinks. . .I think because we live in such a media--the kids are so used to being entertained. You are competing with their attention with all sorts of things, and, well, even as adults, we get bored with the same old thing all the time. . .I think you have a greater chance for learning to take place if they get the ideas and concepts in all sorts of forms.

Christine's attention to different approaches for learning the <u>same</u> concept is interestingly different from Grace's position on different arrangements for <u>different</u> sorts of learning.

<u>A Final Perspective on the Four Cases</u>

Case studies sketched quickly are not the basis for extravagant claims, yet sound claims can be built upon the four just discussed. First, as we

have known all along, the teachers evince unique beliefs and principles in their interviews--an unsurprising commonplace. What is more surprising, though, is how the beliefs and principles differ. There are differences here in what counts as important, in conceptions of what it is to be a teacher and a person, in views of what knowledge and learning is, and much more. Second, we can readily extract from this picture of differences some items of practical knowledge. Despite the common Language Arts base shared by these four teachers, we should not expect them to treat a given curriculum similarly. They will modulate (Roberts' phrase again) materials and intentions according to the unique ways in which they perceive them and very possibly according to the beliefs and principles revealed here. Also, we would not expect these teachers to be stimulated in the same way by the same programs of professional development. But, the matter goes far deeper than this: any attempt to provide a satisfying and fortifying professional working environment for these teachers must take account of their idiosyncratic stances toward those elements of teaching life which have special importance to them.

Conclusions

All that might be concluded from the few case studies and fragments which have ben presented here has already been said. So the sources for conclusions to a study like this are not found in the particularities of the data but in the theoretical orientation and its methodological manifestation.

The study, of course, has limitations. Many of these fall directly from the context that was established for the teachers in which to consider their teaching. Had the "elements" been drawn from observations of these teachers, then the beliefs and principles which would have emerged from their thinking about particular teaching events might well have been different. Yet, the

context was drawn broadly and it may be said with confidence that each teacher was faced with the same contextual problem, namely, describing with brief statements a broad view of what her teaching was like. Other limitations arise in the factor analysis (already discussed) and in the extent to which the finite boundaries of the grid itself constrict the flow of significant "elements" and characterizing or distinguishing phrases. But, for all of this, the power of the approach is clear, and that is worth recalling.

Earlier, the argument for studying teachers' beliefs and principles was pressed on the grounds of their inescapable importance to understanding curriculum innovation and implementation, teacher decision making, and the improvement of teaching. Presumably, intensively detailed ethnographic work could provide similar knowledge of teachers' beliefs and principles, but it can only do so if there is a focus. In the present study, the focus on beliefs and principles was determined initially, and the problem became one of identifying a methodology consistent with the contextualist thesis. Kelly's Repertory Grid Technique is an outgrowth of a contextualist theory and so provides the research with the necessary pointedness and consistency from one end of the argument to the other.

Also noteworthy is the impact that the study had on some of the participants. At the close of the second interview Ellen commented, "A lot of self-examination goes on in these two days, these two times." When I asked, "How was that for you?" She replied:

> Enjoyable, kind of nervous, apprehensive at first. I didn't know if what I was saying was right. I didn't know what I was supposed to say, then I realized just to say what you feel. I really concentrated and I guess all my inner thoughts--I haven't done that in a long time, really

evaluated why I do what I do, which we all should do every now and then. That is the main thing, I really poured out and delved deep inside of my soul.

I conclude that understanding one's own orientation to professional life is the first step to judging it and even altering it. Evidently, a practically useful, contextually apt and theoretically sound approach to improving teaching begins with comprehending the teacher's point of view.

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	B	C	D	E	F	G	H	I	J	K	L	M	N	To-tals
Curriculum Goals			1	1	1-		1+ 3	1+ 1-		1 3+	2+ 1+	2+ 2-	1+ 1-	16
Extra Curriculum Academic Goals				5 2		1+	1-							4
Extra Curriculum Personal Goals			2-	6			6+ 6-			2+				5
Principles from Subject Matter			3 2+							4+				3
Managing Time		3+ 3-												2
Managing Behavior	3	4			2+				3+ 4-					5
Locus of Control	1+ 1-				5	1-		2+	2+			1	3-	8
Evaluation								5+ 5-						2
Student Involvement	2+ 2-	5- 5+			3	2+ 2-		2- 3-		4-	3- 3+		5	13
T Need for Order					2-				5					2
T Personal Need for Relations					4			3+				3+ 3-		4
Frustration								4						1
Need to put Professional Knowledge to Use									6					1
Ss Personal Needs					1+				3+				2+	3
Ss Academic Needs, Differences, Limitations			4+ 4-			3	2 5						3+ 4+	7
Facilitating Learning: Self-Esteem		1							2+					2
Questioning		2												1
Instructional Variety		6		6					4+		2-			4
Motivation									1+ 1-		1-		2- 4+	5
Application and Transfer				4										1
Classroom Atmosphere							4							1
Order										2-				1

Table 1. A Categorization of the Beliefs and Principles

1. T is reading poetry
2. T writes a word from poem on the board
3. Ss suggest possible meanings for the word on the board
4. T leads a discussion highlighting diff. (different) interpretations of poetry
5. Ss copy notes from the o/h (overhead) projector
6. Ss read stories silently
7. Ss write stories imitating those read
8. Ss do activity sheets
9. Ss check activity sheets in class with discussion of best answers
10. Ss work in groups to solve a problem
11. A group of students present a play written by them, based on a short story they have read
12. Ss write play from short story in groups
13. Ss prepare props for the play
14. Ss give oral presentations of book reports using an interview format
15. Ss give persuasive speeches
16. T chairs a class discussion
17. Ss copy words and define them prior to reading stories
18. T dictates five words for a spelling test
19. Ss write sentences using the dictated word
20. T distributes Moffatt (activity) cards

Figure 1. "Elements" elicited from Grace for the grid.

1. Creative work (silent)
2. Accustomed to speaking in public
3. Ss need some protection
4. Developing reading skills
5. Need definitions for reading
6. Related to spelling
7. Student participation
8. T is acting
9. Ss are listening
10. Ss read poetry line by line
11. Ss aware of several interpretations
12. T and S working together for best results
13. Develop interpersonal skills
14. Develop listening skills
15. T dominated
16. Everything originates with T
17. Ss have less input
18. Develop their thinking skills

Figure 2. Grace's terms and phrases for the "construct" axis.

3 = Definitely associated

2 = Neutral

1 = Definitely not associated

	1. Creative work (silent)	2. Accustomed to speaking in public	3. Ss need some protection	4. Developing reading skills	5. Need definitions for reading	6. Related to spelling	7. Student participation	8. T is acting	9. Ss are listening	10. Ss read poetry line by line	11. Ss aware of several interpretations	12. T & S working together for best res.	13. Develop interpersonal skills	14. Develop listening skills	15. T dominated	16. Everything originates with T	17. Ss have less input	18. Develop their thinking skills
1. T is reading poetry	1	1	1	3	2	1	2	3	3	3	3	3	2	3	3	2	3	3
2. T writes a word from poem on the board	1	2	2	3	3	3	3	3	3	3	3	3	3	3	2	2	1	3
3. Ss suggest possible meanings for the word on the board	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	1	3
4. T leads a discussion of different interpretations of poetry	1	1	2	3	2	2	2	3	3	3	3	2	2	2	3	2	1	2
5. Ss copy notes from the overhead projector	1	1	1	2	2	2	2	2	2	1	1	3	2	2	2	2	2	2
6. Ss read stories silently	3	1	2	3	3	3	3	1	2	2	2	2	2	2	2	2	1	3
7. Ss write stories imitating those read	3	1	3	3	3	3	3	2	2	2	3	2	2	2	1	1	1	3
8. Ss do activity (work) sheets	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2
9. Ss check activity sheets in class with discussion of best answers	1	1	1	2	2	2	2	3	3	1	3	3	3	3	2	2	2	2
10. Ss work in groups to solve a problem	1	3	3	3	2	2	3	2	3	1	2	3	3	3	2	1	1	3
11. A group of Ss presents a play written by them based on short story they have read	2	3	3	3	2	2	3	2	3	2	3	3	3	3	2	1	1	3
12. Ss write play from short story in groups	2	1	2	3	3	3	3	2	3	2	3	3	3	3	2	1	1	2
13. Ss prepare props (for play)	1	2	3	3	2	2	3	2	3	1	3	3	3	3	2	1	1	3
14. Ss give oral presentations of book reports using an interview format	1	3	3	3	2	2	3	1	3	1	2	2	3	3	1	1	1	3
15. Ss give persuasive speeches	1	3	1	3	2	2	3	1	3	1	2	2	2	3	1	1	1	3
16. T chairs a class discussion	1	2	2	2	2	2	2	3	3	1	2	2	2	2	3	3	3	2
17. Ss copy words and define them prior to reading stories	1	1	1	2	3	3	2	1	1	1	2	2	1	1	3	3	3	2
18. T dictates 5 words for spelling test	1	1	1	1	1	3	1	2	3	1	1	2	1	2	3	3	3	1
19. Ss write sentences using dictated words	3	1	1	2	2	3	3	1	1	1	2	1	1	1	1	1	1	2
20. T distributes Moffatt cards	3	3	3	3	2	2	3	2	3	2	3	3	3	3	2	1	1	3

Figure 3. Grace's Completed Grid.

Group 1

Students participation
Develop their thinking skills
Developing reading skills
Ss need some protection
Accustomed to speaking in public

Everything originates with T (-)[1]
Ss have less input (-)
T dominated (-)

Group 2

Ss are listening
Developing listening skills
T and S working together for best results
Develop interpersonal skills

Related to spelling (-)
Creative work (silent) (-)

Group 3

Ss read poetry line by line (-)
Ss aware of several interpretations (-)
Need definitions for reading (-)
T is acting (-)

[1]Indicates negative varimax loading

Figure 4. Factors extracted from Grace's grid.

1. Direction: Teacher vs. Student

Teacher initiated	Individually directed (-)[1]
T has active part	Ss do it themselves (-)
T directly involves students	Ss are responsible (-)
T and S interaction	
Combination lecture and questions	

2. Student involvement vs. non-involvement

Ss involved in doing	No student response required (-)
Ss have to participate	Ss sit back (-)
Individuals answer questions	T does everything (-)
	Ss clear their minds (-)

3. Management vs. attention

T allows disruption	Ss pay attention (-)
Ss are not interested	
Behaviors you don't want to see	

[1]Indicates negative varimax loading

Figure 5. The principles and component phrases for Betty

1. Self-esteem is necessary for learning

2. Learning follows competent questioning

   Ss feel glad that they asked
   Ss feel free to try answers
   Knowledge and asking questions
   Ss need healthy self-image
   Ss feel good about being there
   T doesn't put down Ss
   T competence and learning
   Ss hampered by not asking (the) best question

3. Management of time contributes to learning

   T facilitating
   Time on instruction
   T can be trusted

4. Teacher must be assertive and discipline

   T being assertive
   Rigid rules
   Class rules posted
   Classroom management

5. Students control the listening

   Specific instructions
   Ss control activities

6. Ideas and concepts learned better if all forms of instruction used

   Good T does (use many forms of instructions)
   Used as a means, not as an end

Figure 6. The principles and component phrases for Christine